

1. (Currently amended) A computer-implemented method determining a listing of hosts on a network to perform a parallel application, said method comprising:

determining a listing of all possible hosts on said network for performing said parallel application;

determining, for each of said possible hosts, a current capacity and a current utilization;

calculating, for each of said possible hosts, a difference between said current capacity and said current utilization; and

selecting from said listing of all possible hosts a listing of hosts based on sorting said calculated differences,

wherein said selecting a listing of hosts from said listing of all possible hosts further comprises a quantification of a history of each said possible host and a consideration of said history in said selecting of a listing.

2. (Rejected) The method of claim 1, wherein said determination of a listing of processors is itself a parallel processing application.

3. (Rejected) The method of claim 1, wherein said determination of a listing of processors is executed in real time concurrently with said parallel application.

4. (Rejected) The method of claim 1, further comprising:

providing said selected listing of hosts to an operating system controlling an execution of said parallel application.

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5. (Canceled)

6. (Rejected) The method of claim 1, wherein said calculating a difference between current capacity and a current utilization further comprises:

normalizing said difference.

7. (Currently amended) A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to determine a listing of hosts on a network to perform a parallel application, said machine-readable instructions comprising:

determining a listing of all possible hosts on said network for performing said parallel application;

determining, for each of said possible hosts, a current capacity and a current utilization;

calculating, for each of said possible hosts, a difference between said current capacity and said current utilization; and

selecting from said listing of all possible hosts a listing of hosts based on sorting said calculated differences,

wherein said selecting a listing of hosts from said listing of all possible hosts further comprises a quantification of a history of each said possible host and a consideration of said history in said selecting of a listing.

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8. (Rejected) The signal-bearing medium of claim 7, wherein said machine-readable instructions are provided to an operating system on said network such that said determination of a listing of processors is itself a parallel processing application.

9. (Rejected) The signal-bearing medium of claim 7, wherein said machine-readable instructions are provided to an operating system on said network such that said determination of a listing of processors is executed in real time concurrently with said parallel application.

10. (Rejected) The signal-bearing medium of claim 7, said machine-readable instructions further comprising:

providing said selected listing of hosts to an operating system controlling an execution of said parallel application.

11. (Canceled)

12. (Rejected) The signal-bearing medium of claim 7, wherein said calculating a difference between current capacity and a current utilization further comprises:

normalizing said difference.

13. (Rejected) A computer network having a plurality of computation resources and an operating system for executing a target parallel application process using at least a subset of said plurality of computation resources, wherein said network includes a method to

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determine a listing of said computation resources to perform said target parallel application process, said method comprising:

determining a listing of all possible said computation resources on said network for performing said parallel application;

determining, for each of said possible computation resources, a current capacity and a current utilization;

calculating, for each of said possible computation resources, a difference between said current capacity and said current utilization; and

selecting from said listing of all possible computation resources a listing of computation resources based on sorting said calculated differences as said at least a subset of said plurality of computation resources to execute said target parallel application process,

wherein said selecting a listing of hosts from said listing of all possible hosts further comprises a quantification of a history of each said possible host and a consideration of said history in said selecting of a listing.

14. (Rejected) The computer network of claim 13, wherein said method interfaces to an operating system on said network such that said determination of a listing of computation resources is itself a parallel processing application.

15. (Rejected) The computer network of claim 13, wherein said method interfaces to an operating system on said network such that said determination of a listing of computation resources is executed in real time concurrently with said parallel application.

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16. (Rejected) The computer network of claim 13, said method further comprising:  
providing said selected listing of computation resources to an operating system  
controlling an execution of said parallel application.

17. (Canceled)

18. (Rejected) The computer network of claim 13, wherein said calculating a difference  
between current capacity and a current utilization further comprises:  
normalizing said difference.

19. (Currently amended) A computer network having a plurality of computation  
resources and an operating system for executing a target parallel application process  
using at least a subset of said plurality of computation resources, wherein said network  
includes a method to determine a listing of said computation resources to perform said  
target parallel application process, said method comprising:  
means for determining a listing of all possible said computation resources on said  
network for performing said parallel application;  
means for determining, for each of said possible computation resources, a current  
capacity and a current utilization;  
means for calculating, for each of said possible computation resources, a  
difference between said current capacity and said current utilization; and

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means for selecting from said listing of all possible computation resources a listing of computation resources based on sorting said calculated differences to be said at least a subset of said computation resources for executing said target parallel application process,

wherein said selecting a listing of hosts from said listing of all possible hosts further comprises a quantification of a history of each said possible host and a consideration of said history in said selecting of a listing.

20. (Rejected) The computer network of claim 19, wherein said method interfaces to an operating system on said network such that said determination of a listing of computation resources is executed in real time concurrently with said parallel application.

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